



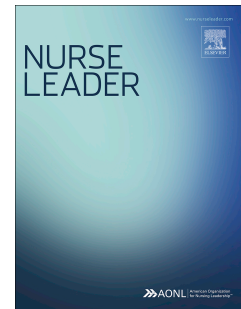
Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.

# Journal Pre-proof

COVID-19's Disruptive Innovation: Accelerating the Academic Preparation of Professional Nurses Ambulatory and Telehealth Roles

Sara Kollman, DNP, RN, NE-BC, Denise Braegger, RN, MSN, MBA, Barbara Head, MSN, RN



PII: S1541-4612(21)00226-3

DOI: <https://doi.org/10.1016/j.mnl.2021.10.003>

Reference: YMNL 1927

To appear in: *Nurse Leader*

Received Date: 8 October 2021

Accepted Date: 12 October 2021

Please cite this article as: Kollman S, Braegger D, Head B, COVID-19's Disruptive Innovation: Accelerating the Academic Preparation of Professional Nurses Ambulatory and Telehealth Roles, *Nurse Leader* (2021), doi: <https://doi.org/10.1016/j.mnl.2021.10.003>.

This is a PDF file of an article that has undergone enhancements after acceptance, such as the addition of a cover page and metadata, and formatting for readability, but it is not yet the definitive version of record. This version will undergo additional copyediting, typesetting and review before it is published in its final form, but we are providing this version to give early visibility of the article. Please note that, during the production process, errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Copyright 2021 by Elsevier Inc.

**TITLE:** COVID-19's Disruptive Innovation: Accelerating the Academic Preparation of Professional Nurses Ambulatory and Telehealth Roles

**AUTHORS:**

**Sara Kollman, DNP, RN, NE-BC (corresponding author)**

Chief Nursing Officer/ Nurse Executive

Nursing Services/Clinical Excellence

**\*\*Kaiser Foundation Health Plan Colorado**

Waterpark III, Suite 300

2550 S. Parker Road

Aurora, CO 80014

303-636-3036 (office phone)

720-688-3609 (mobile phone)

[sara.m.kollman@kp.org](mailto:sara.m.kollman@kp.org)

**\*\*all authors have same address**

**Denise Braegger RN, MSN, MBA**

Director of Professional Practice and Nursing Quality

Nursing Services/Clinical Excellence

720-491-8923 | [denise.e.braegger@kp.org](mailto:denise.e.braegger@kp.org)

**Barbara Head, MSN, RN**

Director of Education and Professional Development for Nursing,

Nursing Services/Clinical Excellence

(303)636-3129 (office)

(303)653-1702 (mobile phone)

[Barbara.Head@kp.org](mailto:Barbara.Head@kp.org)

Journal Pre-proof

## COVID-19's Disruptive Innovation: Accelerating the Academic Preparation of Professional Nurses Ambulatory and Telehealth Roles

### **Introduction/ Background**

The COVID-19 pandemic has challenged and disrupted all aspects of health care. We have survived early acute care surges in critically ill patients with unclear infectious disease risks, supply chain disruption and essential worker shortages and identified the unrecognized importance of public health infrastructure and impacts of social determinants of health. We are continuing to learn about the impact of virus variants, the resiliency impacts to our workforce, and the long-range financial sequelae. The exponential speed of this disruptive innovation has pushed health care organizations, private and public sector businesses, and academia to come together in ways only imagined prior to COVID-19.

One outcome is enhancing nursing's role in community, ambulatory and telehealth care venues now and for future care delivery. In addition, it has reinforced the gap of academic preparation for practice-ready ambulatory and telehealth professional nurses. Compounding this is the lack of applicable clinical experiences across the continuum of care and in the management of complex conditions in non-hospital based, acute care delivery settings. The Future of Nursing 2020-2030: Charting a Path to Achieve Health Equity and American Association of Colleges of Nursing's (AACN) The Essentials: Core Competencies for Professional Nursing Education are the roadmaps to our profession's future trajectory.<sup>1,2</sup>

The stage is set for revolutionary and innovative changes for the nursing profession. Population health and community-focused care, fully leveraging ambulatory and telehealth practices, are the emerging health care venues as well as a solution to the US health care equity and cost containment challenges. Corresponding and aligned academic reformation is pivotal to lead this change and fundamentally redesign the nursing profession's essential post-pandemic

role. A high-level overview of the report recommendations, exemplars of disruptive innovations in academic preparation for population-based, ambulatory care and telehealth professional nursing practice roles, and implications for nurse executives will be identified.

### **Overview of Key Industry Report Recommendations**

The AACN's Essentials report summarizes changes in the post-pandemic preparation of the next generation of nurses. The recommendations include expanded curriculum in four spheres across the care continuum including disease prevention and promotion of health and wellness; chronic disease management; regenerative and restorative care; and hospice, palliative and supportive care. The aim is to develop practice-ready graduates for diverse roles and to intertwine diversity, equity and inclusion and social determinants of health (SDOH) concepts throughout all aspects of outcome-focused learning. Enhanced nursing informatics and technology skills for pre-licensure programs were also emphasized.

The Future of Nursing report sets visionary recommendations for the next decade. It leverages the disruptive innovation and embraces the lessons of COVID, while emphasizing the urgency of diversifying our workforce, redefining professional academic preparations, expanding prioritization of SDOH and care to the underserved, and re-energizing and building resiliency of all healthcare team members. The pandemic only demonstrated and reinforced the increased the need for interprofessional and cross sector collaboration, expansion of scope of practice regulations nation-wide, and implementation of novel care delivery models. By embracing the practices and unprecedented innovations expedited by COVID, we can accelerate the adoption of many of the report's recommendations.

### **Disruptive Academic Innovation in the COVID Era**

The pandemic has illustrated that telehealth, home-based care and other ambulatory nursing services are fundamental to managing chronic and complex health conditions across the lifespan and care continuum. To mitigate strained health care resources, professional nursing roles and scope of practice standards were expanded. Likewise, academic programs were stretched to identify novel student clinical opportunities. Existing curriculums leveraged creative learning objectives to bridge clinical opportunities across the care continuum to align with pandemic response efforts. A systematic review of the literature and thorough review of academic programs is outside the scope of this article; however, several exemplars of program ingenuity will be highlighted.

Pre-licensure programs with expanded curriculum and learning opportunities in community, ambulatory and/ or virtual care clinical areas were beginning to emerge prior to the pandemic. One such program was Emory University, Nell Hodgson Woodruff School of Nursing. Coburn, Gilland, Owen, and Amar published a summary of the novel ambulatory curriculum and expanded clinical requirements in the baccalaureate program.<sup>3</sup> Content in care coordination, transition management and virtual care were included, and both simulated and live clinical experiences reinforced the unique aspects of the ambulatory care nursing specialty.

Several academic programs have received grants from the U.S. Department of Health and Human Services Bureau of Health Workforce, Division of Nursing and Public Health to support ambulatory and telehealth program redesign. The University of Alabama Birmingham has been a pioneer in telehealth simulation in their baccalaureate program.<sup>4</sup> The COVID-19 CARES grant allowed further enhancement of their telehealth curriculum in collaboration with their Office of Technology and Innovation to include a 2-day on-site telehealth fair. The experience included didactic instruction as well as in-person simulation experiences using functional telehealth

equipment and high-fidelity manikins. Loyola University has implemented a Primary Care Community Health Nursing Scholar (PCCHNS) program for undergraduate nursing students in their Bachelor of Science in Nursing degree track.<sup>5</sup> The University of Utah College of Nursing's baccalaureate curriculum incorporates specialized primary care and telehealth content. The aim is “to prepare graduates from rural and underserved areas of Utah to practice at the full scope of their licenses as members and leaders of community-based primary care teams in order to increase access to care, with particular emphasis on chronic disease prevention and control”.<sup>6</sup>

In response to pandemic-restricted clinical opportunities, several academic organizations were required to pivot in order to identify novel and innovative clinical experiences for nursing students. An example of COVID ingenuity was Johns Hopkins University School of Nursing's partnership with the Baltimore Neighbors Network (BNN) to develop a public health service-learning initiative.<sup>7</sup> In addition to public and community health concepts, social justice applications, addressing health disparities and incorporating SDOH were fundamental to the course revisions.

The most creative and revolutionary program design identified was the Community Health Nurse Scholars (CHNS) program, created by five Executive Nurse Fellows in the Robert Wood Johnson Foundation program.<sup>8</sup> The program occurs in five phases, starting with mentoring of middle school students and continues with curricular and career mentoring through the completion of a registered nursing program for low-income youth. The program focused on developing nurses that could return to their communities or areas experiencing significant health disparities. The playbook outlined potential net earnings over the 6-year program and identifies the community benefits of this philosophy. Although no program outcomes could be identified, the playbook for this unique program paves the way for other curriculum design ingenuity that



addresses not only workforce gaps, but also health disparities, and other looming health care challenges.

### **Implications for Nurse Executives**

The call to action for nurse executives is three-fold. First, we need to be bold and innovative in supporting not only traditional pre-licensure clinical experiences in ambulatory, community health and telehealth specialties, but also in partnering with our academic leaders in the design of new, creative educational approaches. This includes collaborative, interprofessional clinical experiences and robust expansion of informatics and other technology.

Next, we need to actively participate in developing and supporting programs that will lead to enhanced care in underserved communities and populations facing significant SDOH challenges. This begins by addressing the diversity, equity and inclusion challenges for both nursing students and faculty.

Finally, we need to redesign clinical and academic preparation that allows “care everywhere”, reshapes our system from illness-based to health-focused, and demonstrates the nursing profession’s role in being the cure for what ails our U.S. health care system. This is accomplished through the dissemination of best practices, networking across public and private sectors, and by supporting and participating in rigorous research endeavors.

### **Conclusion**

The Future of Nursing 2020-2030 report and the AACN’s Essentials are the road maps to re-engineered academic preparation to align with ambulatory and telehealth nursing roles of the future.<sup>1,2</sup> As noted in the Future of Nursing report, *“Nurses have always been key to the health and well-being of patients and communities, but a new generation of nurse leaders is now*

needed—one that recognizes the importance of diversity and is able to use and build on the increasing evidence base supporting the link between SDOH and health status.” Through the disruptive innovation created by the COVID pandemic, it seems only fitting that the World Health Organization’s International Year(s) of the Nurse and Midwife honoring Florence Nightingale’s 200<sup>th</sup> birthday should lead our profession back to the fundamental tenets of population health, mitigation of SDOH, and holistic, health-preserving care for all. It has also provided the perfect opportunity for nurse executives to model Florence Nightingale’s inspiration, perseverance, and wisdom of leading the transformation of healthcare and in redesigning future academic preparation of our nurses.

#### References

1. National Academies of Sciences, Engineering, and Medicine. *The Future of Nursing 2020-2030: Charting a Path to Achieve Health Equity*. Washington, DC; 2021. The National Academies Press. <https://doi.org/10.17226/25982>.
2. American Association of Colleges of Nursing (AACN). *The Essentials: Core Competencies for Professional Nursing Education*. n.a.; 2021. American Association of Colleges of Nursing. <https://www.aacnnursing.org/Portals/42/AcademicNursing/pdf/Essentials-2021.pdf>
3. Cobern, CV, Gilland, D, Owen, M, Amar, A. Ambulatory care education: Preparing nurses for the future of healthcare. *Nurse Education Today*.66:79-81.
4. University of Alabama at Birmingham School of Nursing. Telehealth fair provides skills, experience. University of Alabama at Birmingham School of Nursing. <https://www.uab.edu/nursing/news/home/innovative-programs/item/2521-telehealth-fair-provides-important-skills-experience>. published n.d.; updated 2021; accessed October 7, 2021.
5. Marcella Niehoff School of Nursing. Primary care community health nursing scholars. Loyola University. <https://www.luc.edu/pcchns/> published n.d.; updated 2021; accessed October 7, 2021.

6. University of Utah College of Nursing. Utah NEPQR: Nurse Education, Practice, Quality & Retention Program. <https://utahnepqr.org/> published n.d.; updated 2021; accessed October 7, 2021.
7. Gresh, AL, LaFave, S, Thamilselvan, V, et al. Service learning in public health nursing education: How COVID-19 accelerated community-academic partnership. *Public Health Nursing*. 2021; 38: 248-257.
8. Amidid-Nouri, A, Davis, M, Jaffe, D, Johnson, K, Stambolis, L. *CHNS: Community Health Nurse Scholars*. Robert Wood Johnson Foundation: Executive Nurse Fellows Center for Creative Leadership; published 2017; updated n.d.; accessed October 7, 2021.

## KEY POINTS

- The Future of Nursing 2020-2030: Charting a Path to Achieve Health and AACNs The Essentials: Core Competencies for Professional Nursing Education are summarized as frameworks for academic redesign
- Exemplars of disruptive innovations in academic preparation for ambulatory and telehealth practice-ready graduates are highlighted
- Implications for nurse executives in leading this transformation are shared